Supporting Information for Camarero *et al.* (2002) *Proc. Natl. Acad. Sci. USA* **99** (13), 8536–8541. (10.1073/pnas.132033899)

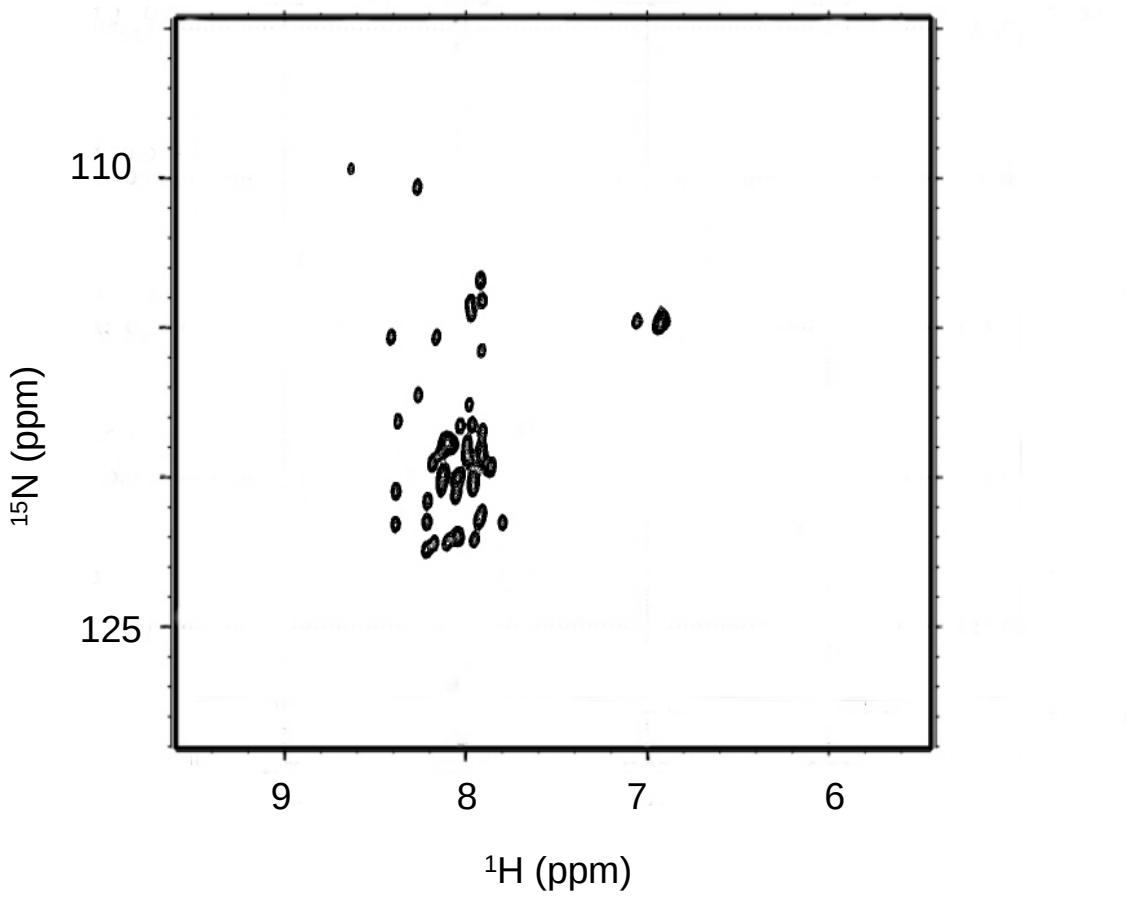

Fig. 6. ^{1}H{^{15}N} HSQC-TROSY spectrum of 100 μM uniformly ^{2}H,^{15}N,^{13}C-labeled isolated 4.2 region of σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

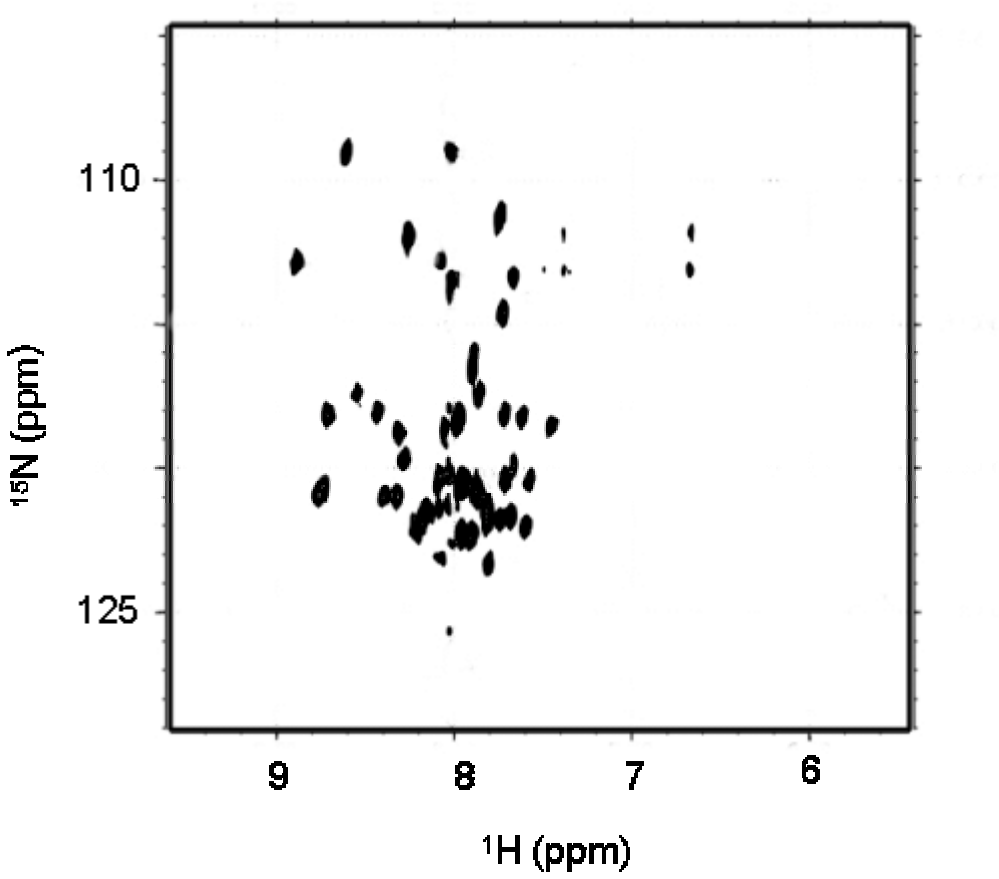

Fig. 7. ^{1}H{^{15}N} HSQC-TROSY spectrum of segmental labeled 100 μM Δ1.1-σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

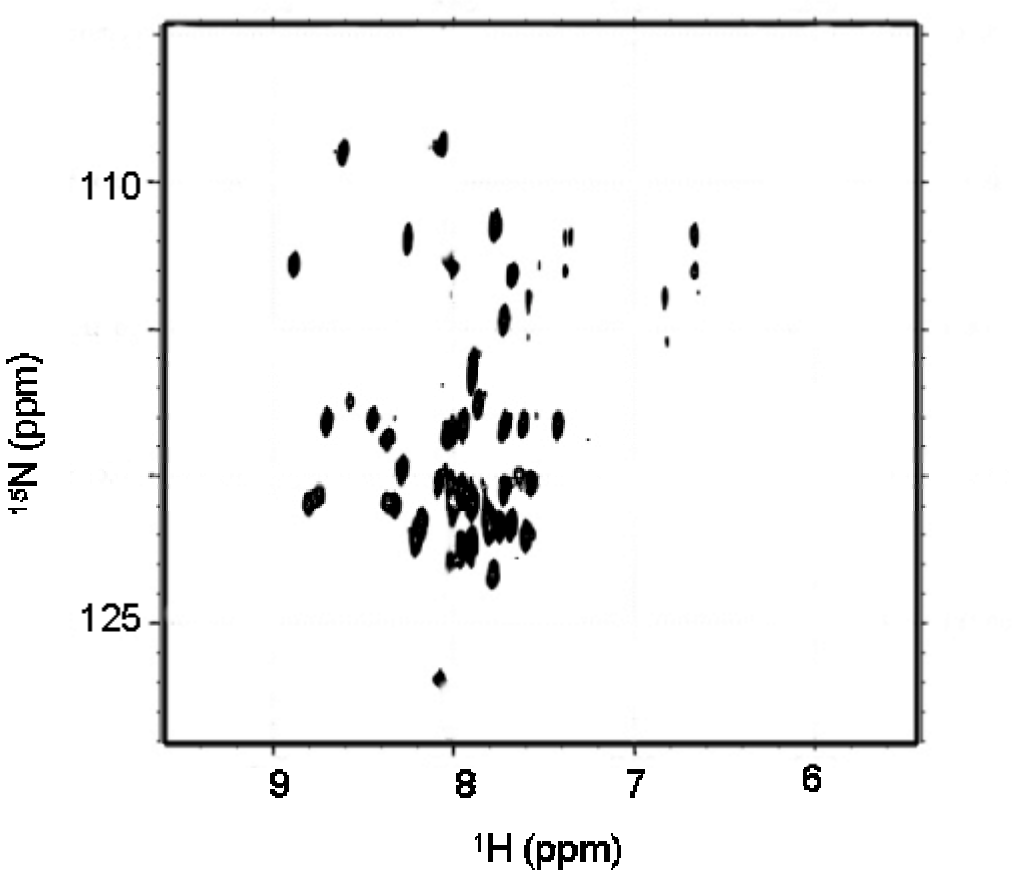

Fig. 8. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

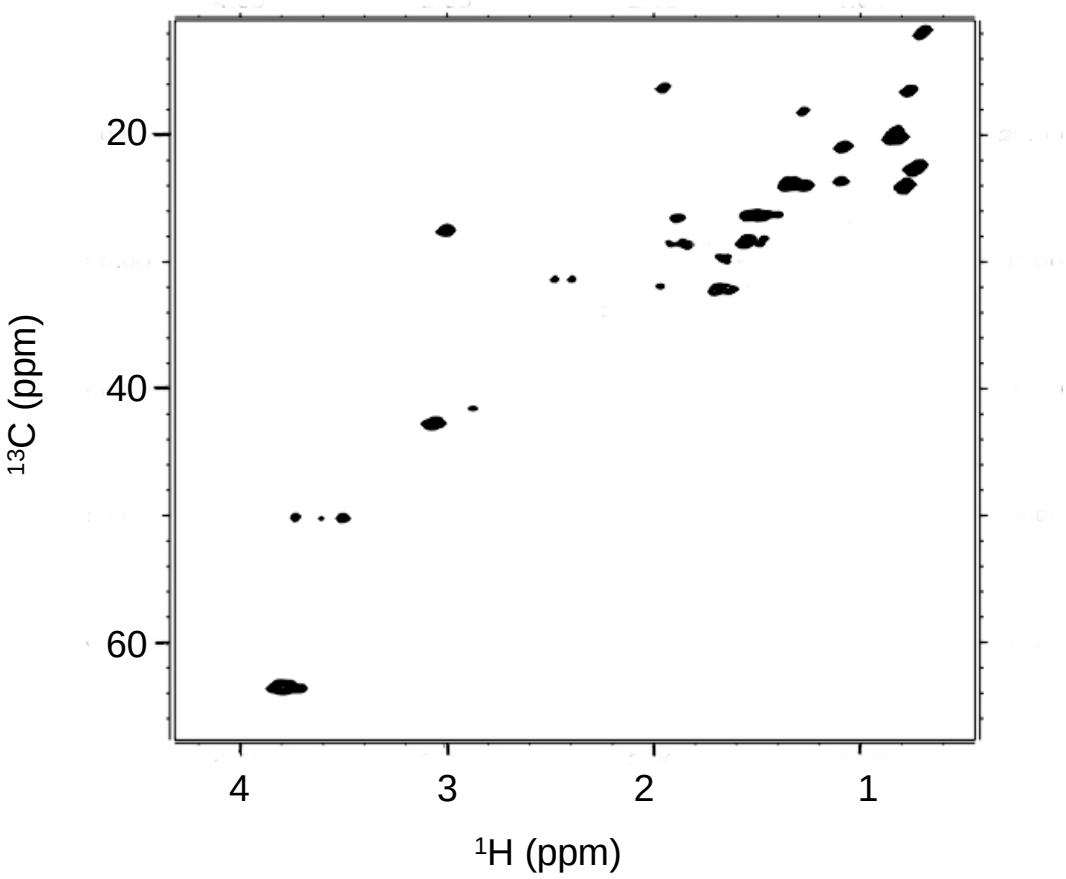

Fig. 9. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of 100 μM uniformly $^{2}H,^{15}N,^{13}C$-labeled isolated 4.2 region of σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

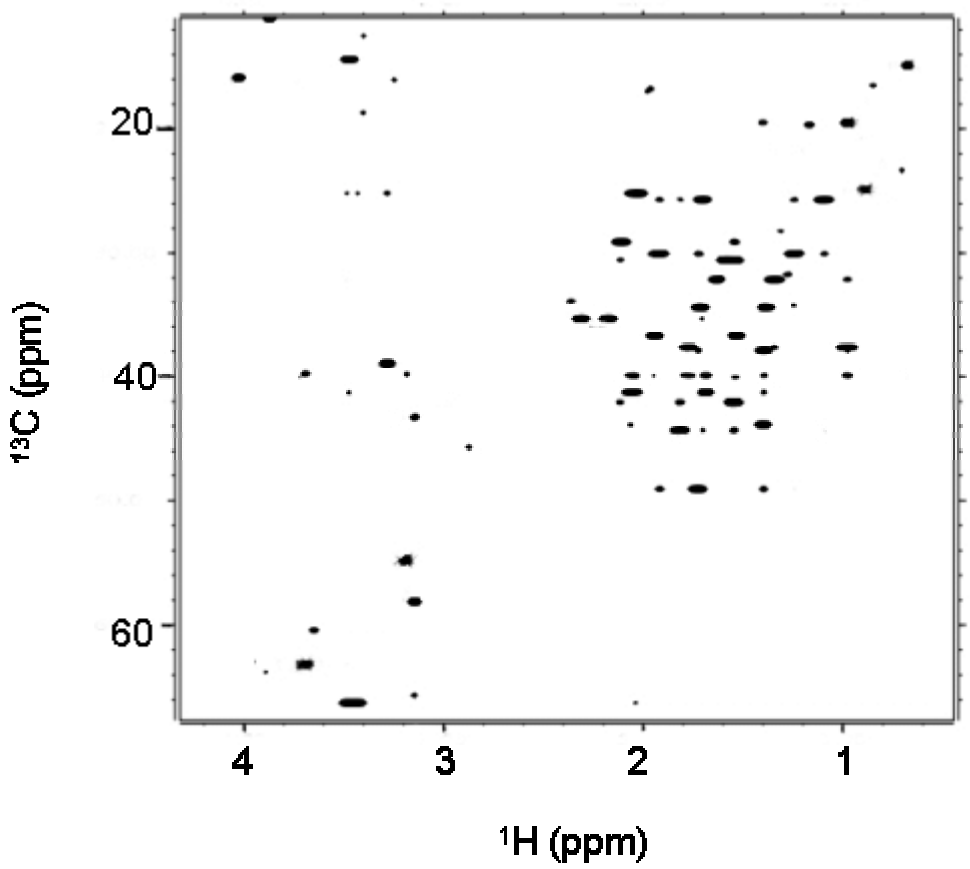

Fig. 10. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

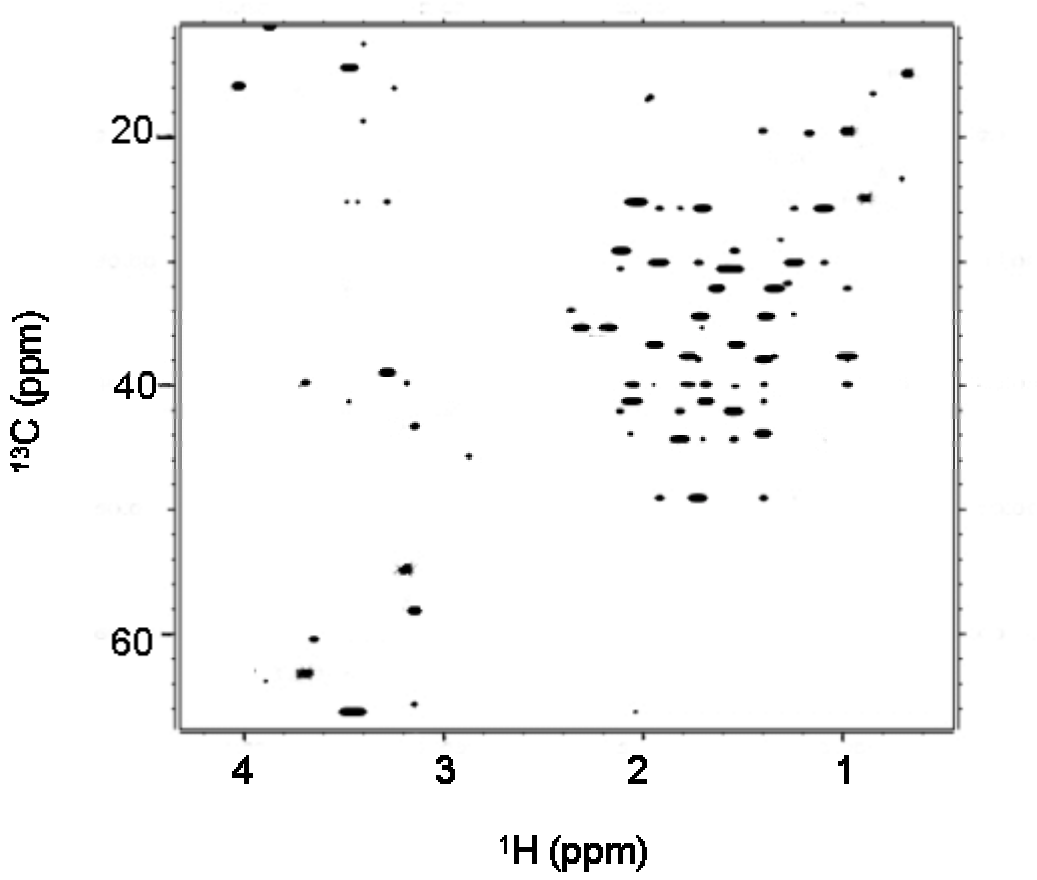

Fig. 11. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM σ^{A*} with 1.2 molar equivalents of purified unlabeled AsiA. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

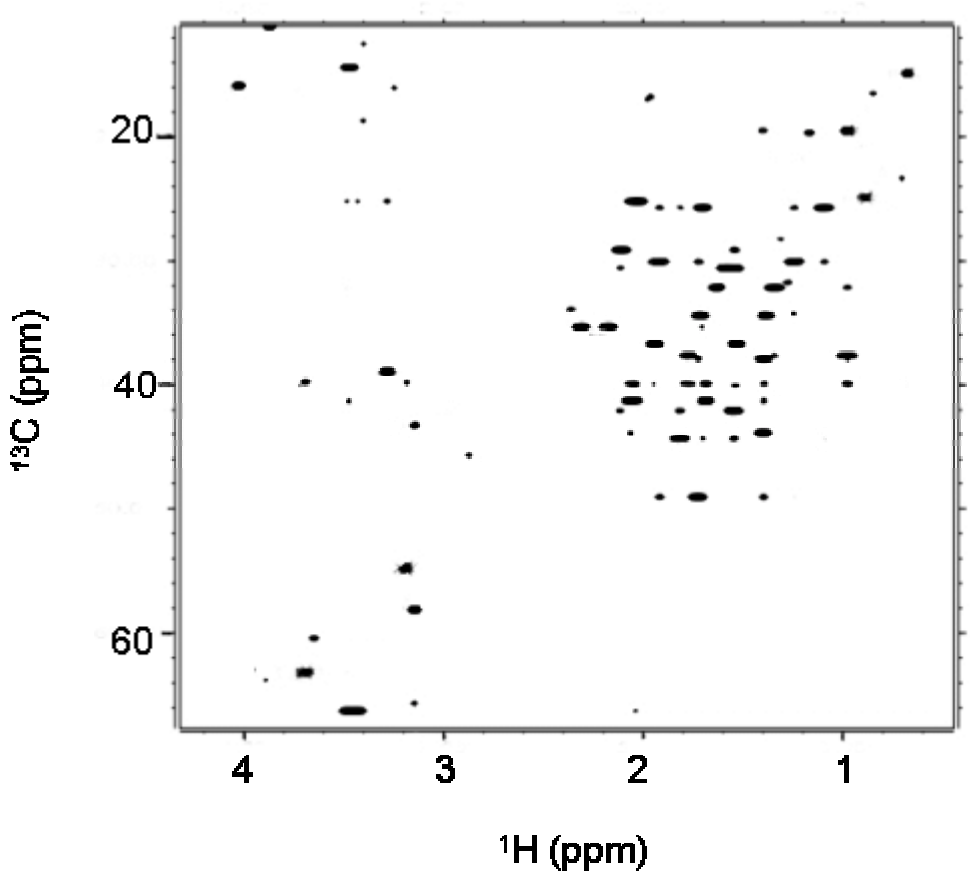

Fig. 12. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM σ^{A*} with 1.2 molar equivalents of unlabeled promoter DNA. . The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

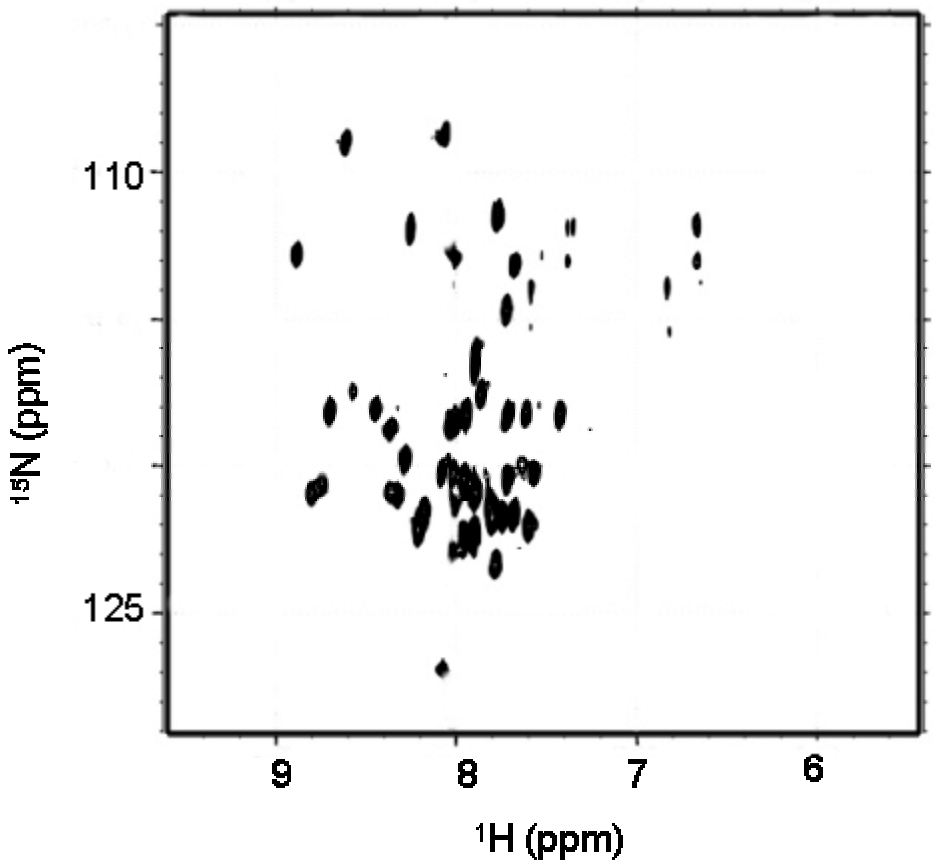

Fig. 13. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM σ^{A*} with 1.2 molar equivalents of unlabeled promoter DNA. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM $[^{2}H_{10}]$DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

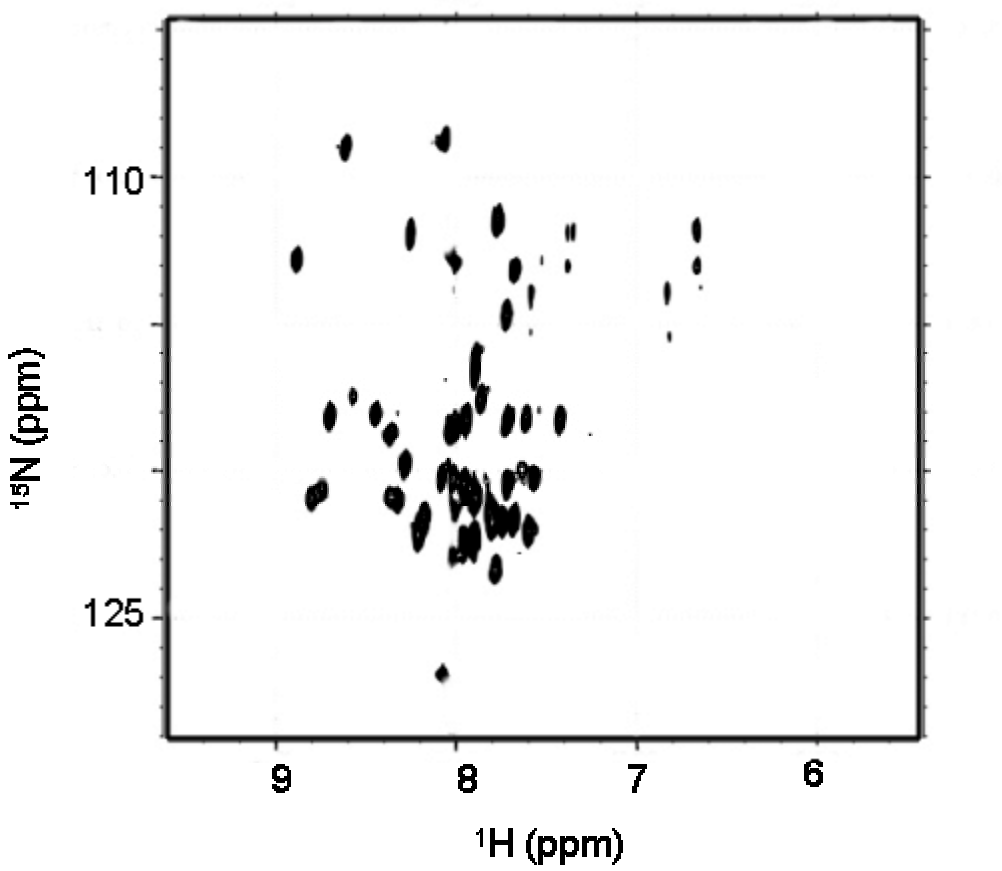

Fig. 14. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM σ^{A*} with 1.2 molar equivalents of purified unlabeled AsiA. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

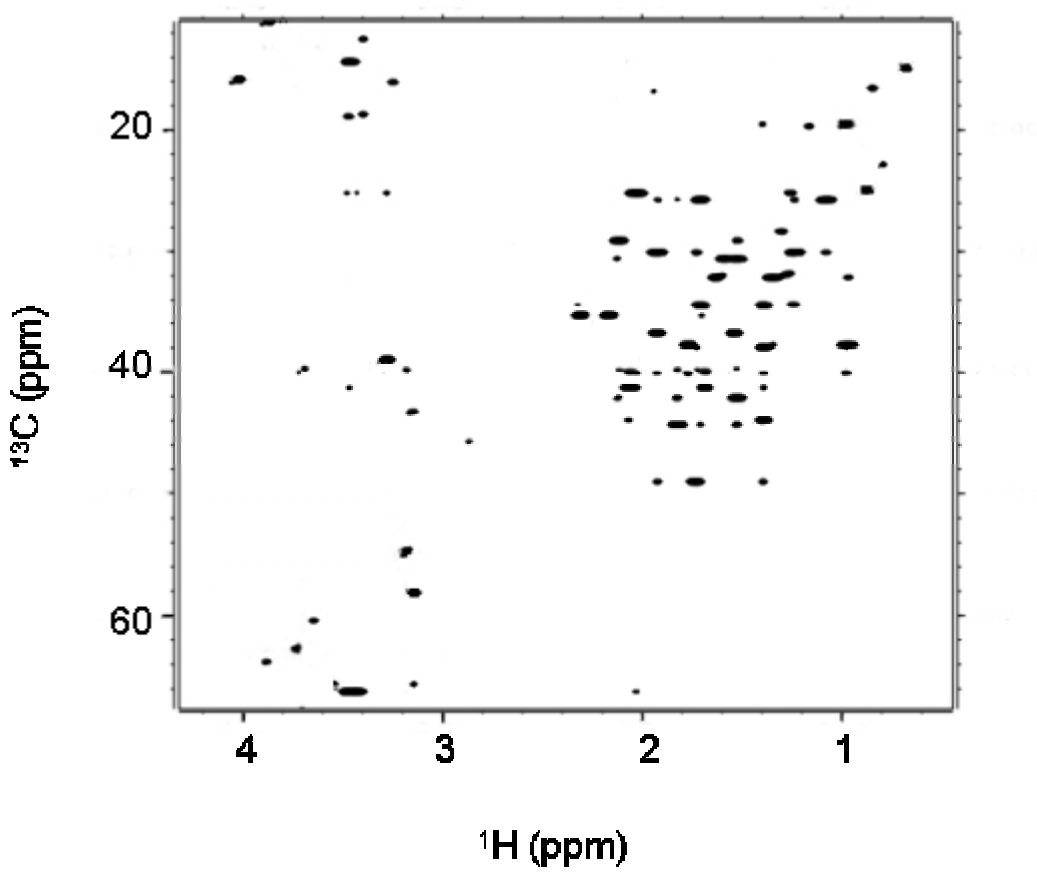

Fig. 15. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM Δ1.1-σ^{A*}. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

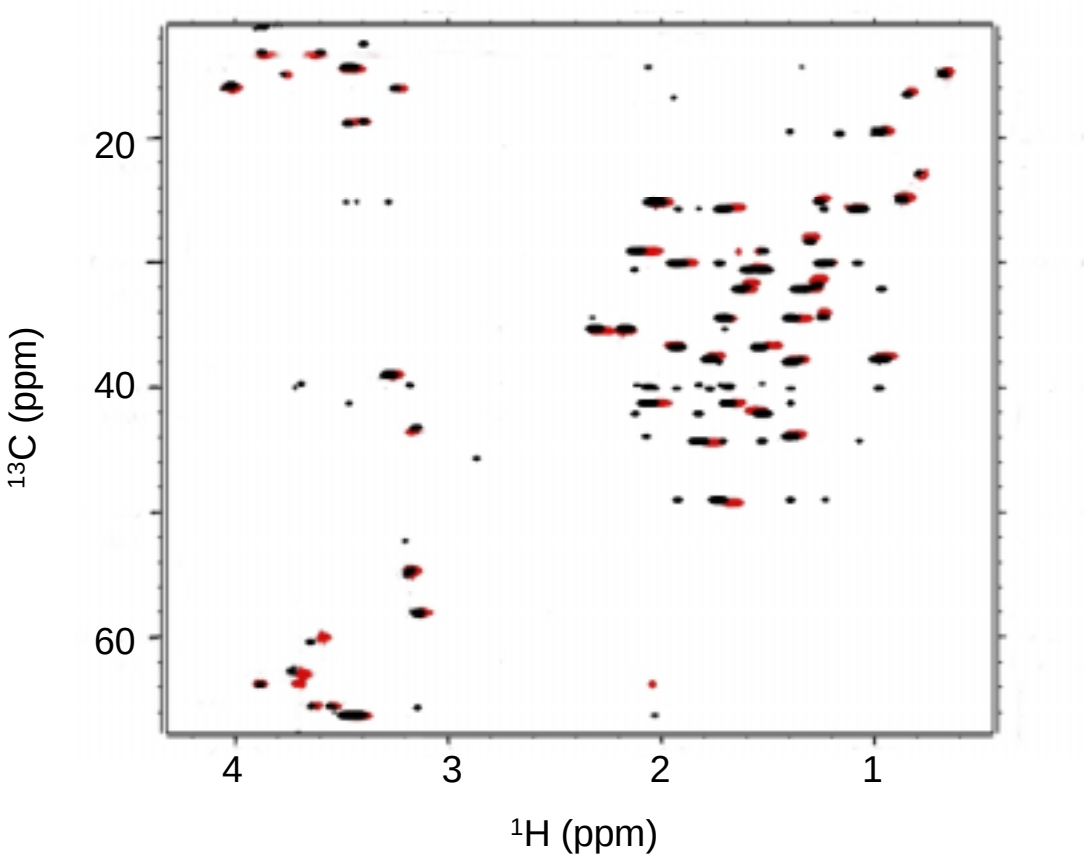

Fig. 16. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} with 1.2 molar equivalents of purified unlabeled AsiA (red) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM Δ1.1-σ^{A*} (black). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

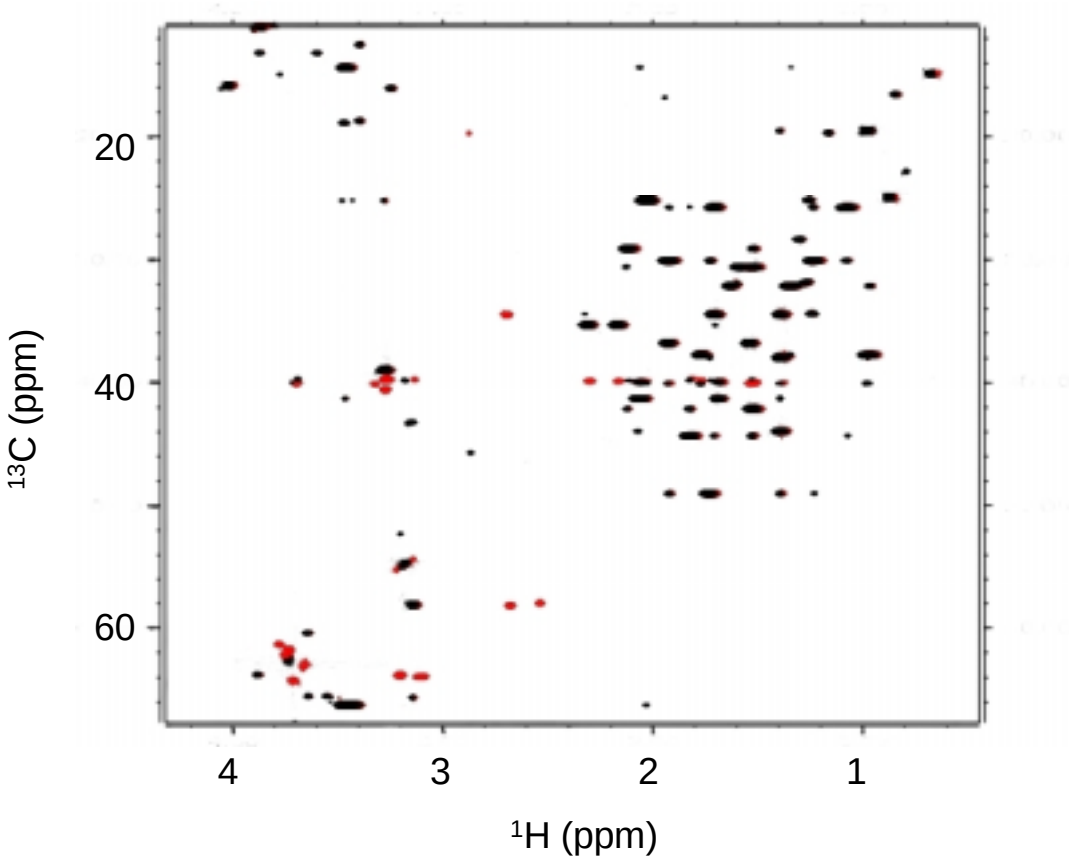

Fig. 17. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} with 1.2 molar equivalents of promoter DNA (red) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM Δ1.1-σ^{A*} (black). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.

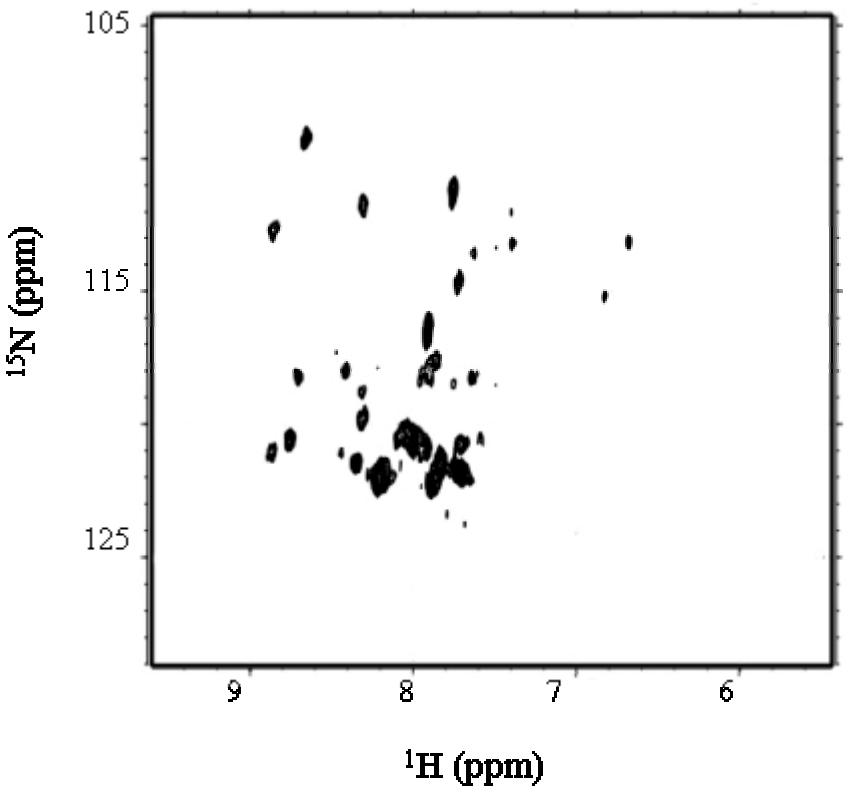

Fig. 18. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} with 1.2 molar equivalents of AsiA. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

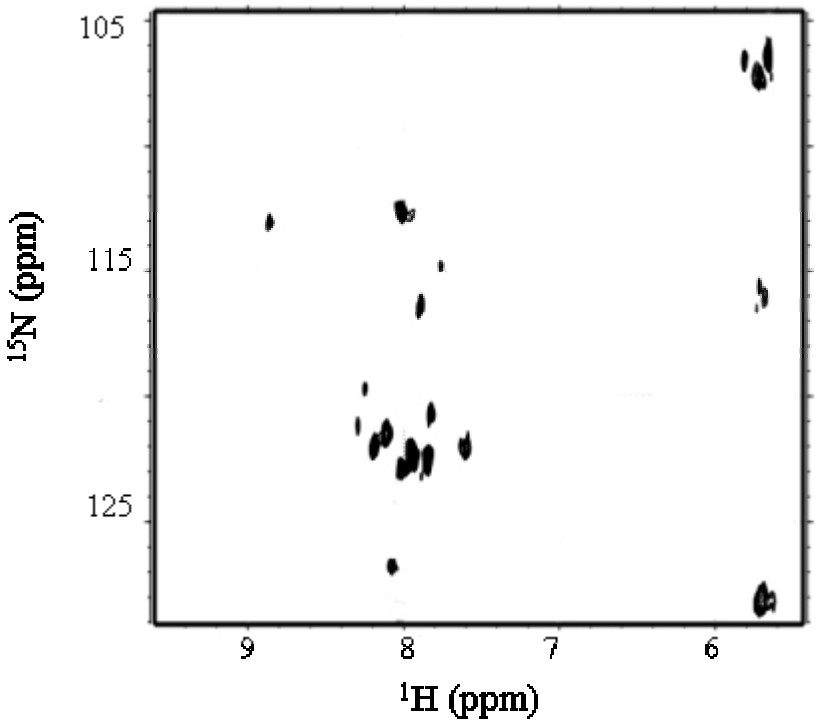

Fig. 19. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} with 1.2 molar equivalents of promoter DNA. The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

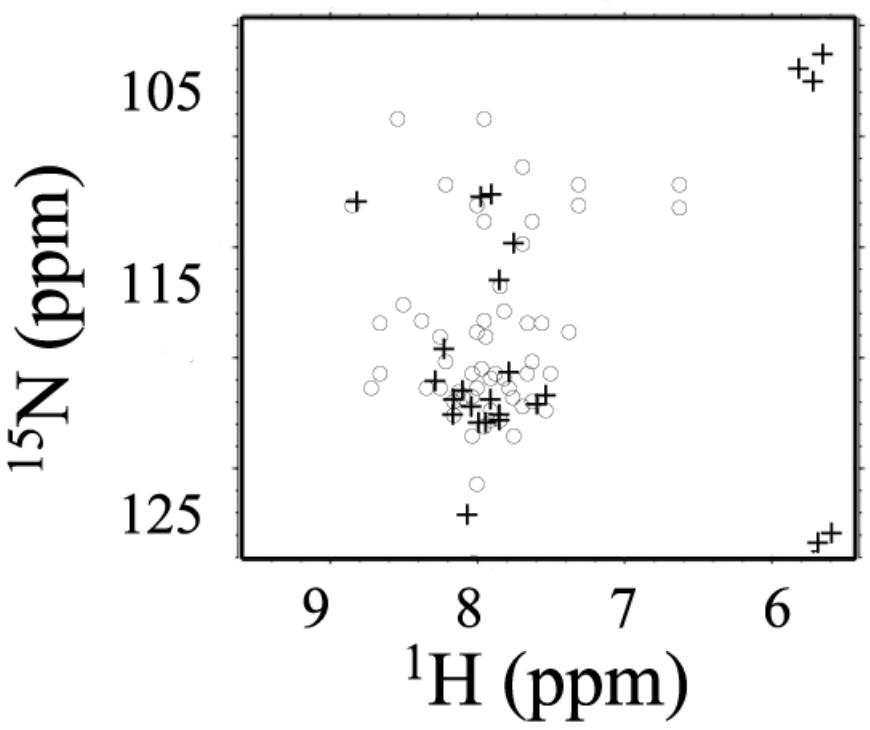

Fig. 20. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} with 1.2 molar equivalents of promoter DNA (crosses) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM Δ1.1-σ^{A*} (circles). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

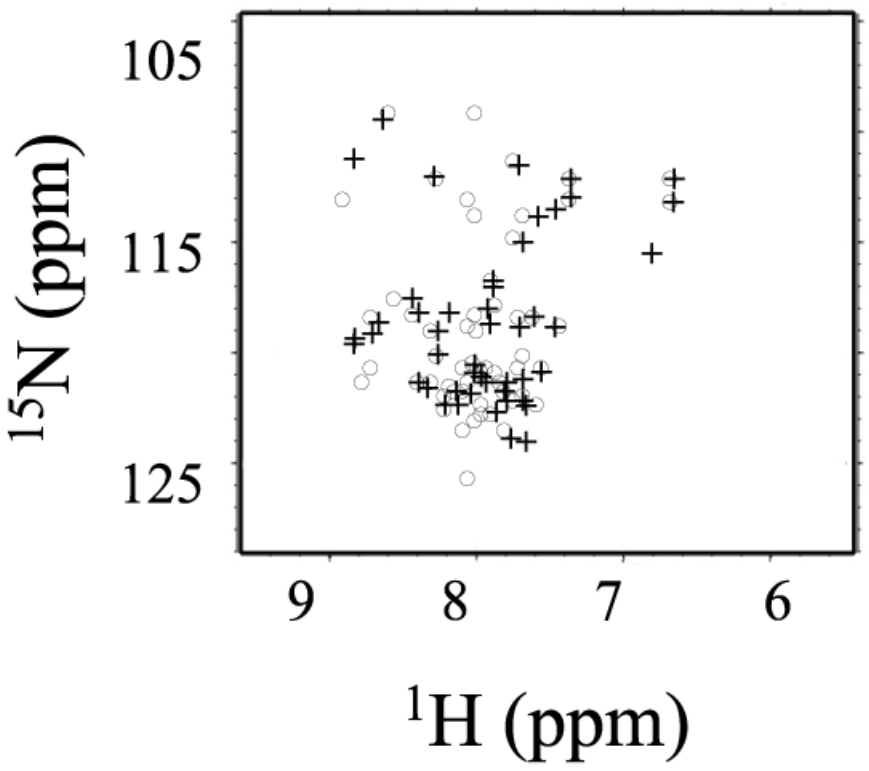

Fig. 21. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM $\Delta 1.1\text{-}\sigma^{A*}$ with 1.2 molar equivalents of AsiA (crosses) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM $\Delta 1.1\text{-}\sigma^{A*}$ (circles). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

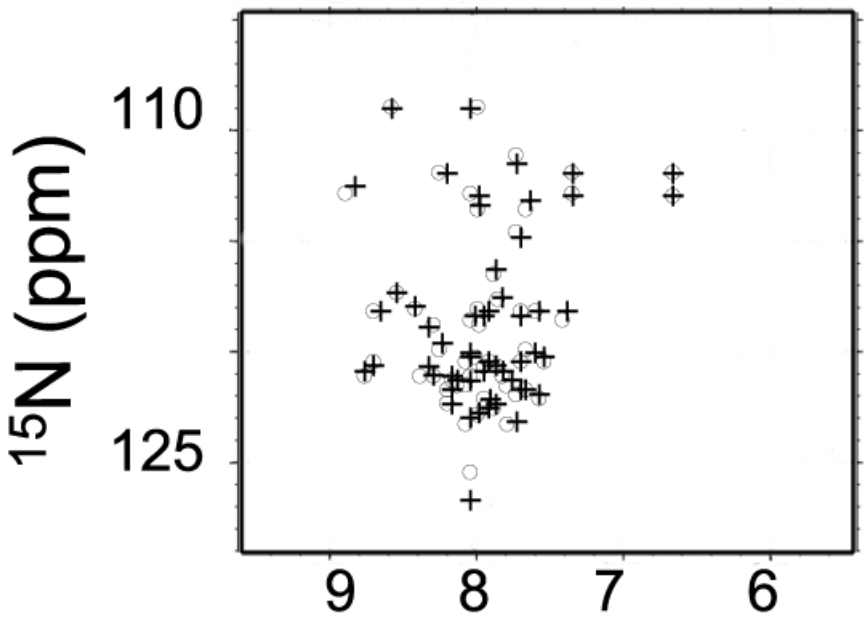

Fig. 22. $^{1}H\{^{15}N\}$ HSQC-TROSY spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} (circles) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM σ^{A*} (crosses). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{15}N dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 30 ppm in ^{1}H and ^{15}N dimensions, respectively.

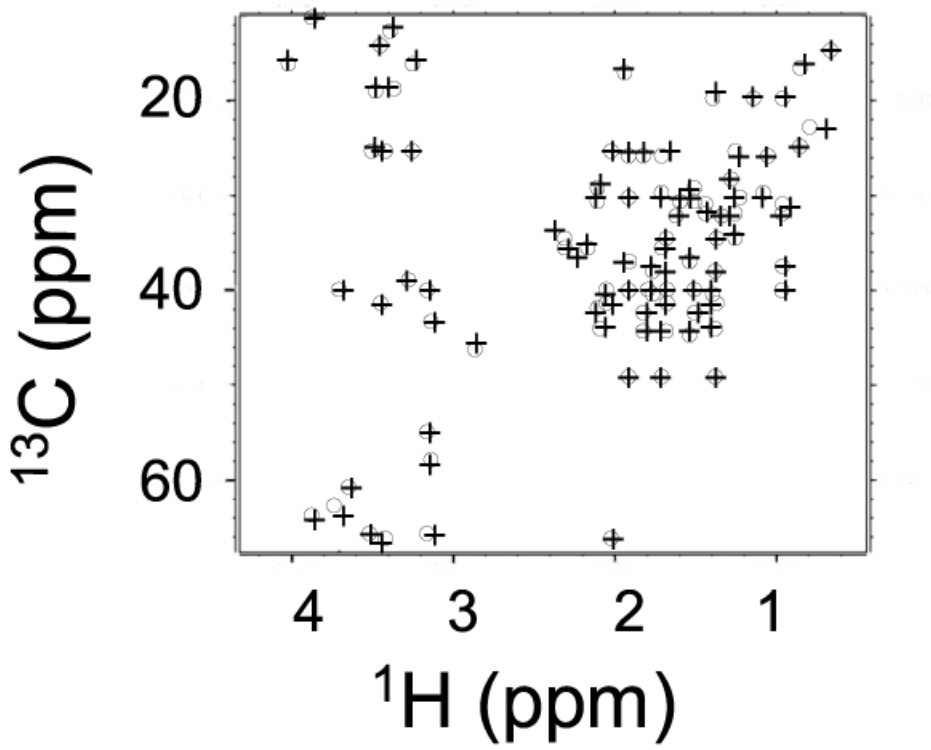

Fig. 23. $^{1}H\{^{13}C\}$ constant-time HSQC spectrum of segmental labeled 100 μM Δ1.1-σ^{A*} (circles) overlaid on the $^{1}H\{^{13}C\}$ HSQC spectrum of 100 μM σ^{A*} (crosses). The sample was in 30 mM Tris•HCl, pH 7.6/100 mM NaCl/20 mM CHAPSO/20 mM [$^{2}H_{10}$]DTT/0.01% NaN_3/10% (vol/vol) $^{2}H_2O$. The data were collected at 35ºC on a Bruker DMX spectrometer operating at a ^{1}H frequency of 600 MHz with 1,000 scans per transient; 512 complex points were collected in ^{1}H and ^{13}C dimensions and multiplied by a cosine-bell window function and zero-filled to 1,000 points prior to Fourier transformation. The corresponding sweep-widths were 12.5 ppm and 70 ppm in ^{1}H and ^{13}C dimensions, respectively.